Model Number

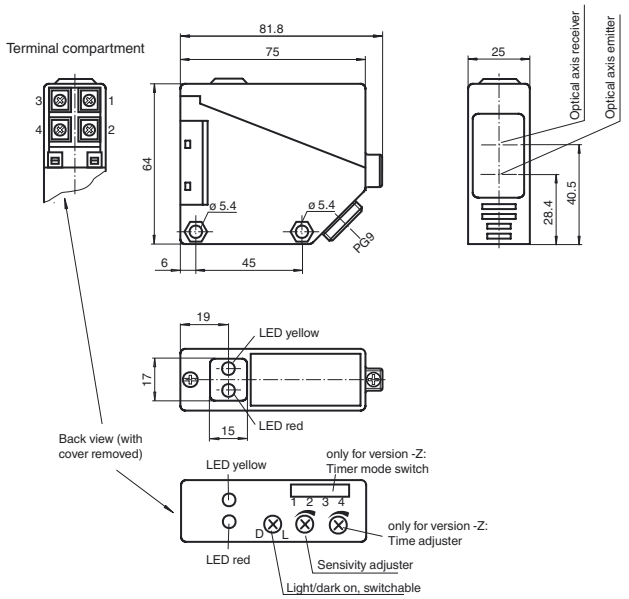
RL39-8-2000/32/40a/82a/116

Diffuse mode sensor
with terminal compartment

Features

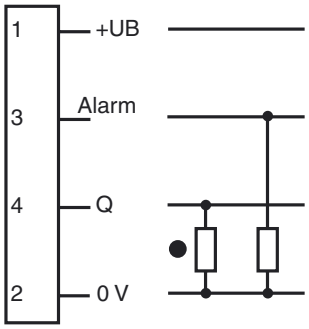
- Infrared light
- Light/dark ON, switchable
- Degree of protection IP67

Dimensions



Electrical connection

Option: 32/40a/82a/116



○ = Light on
● = Dark on

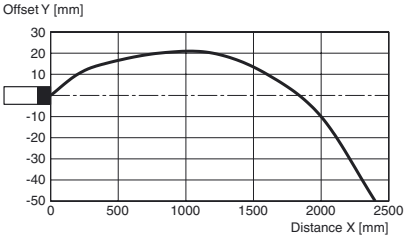
Release date: 2014-04-03 11:57 Date of issue: 2014-04-03 088825_eng.xml

Technical data

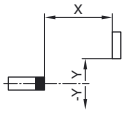
General specifications		
Detection range		0 ... 2000 mm
Adjustment range		75 ... 2000 mm
Reference target		standard white 200 mm x 200 mm
Light source		IRED
Light type		modulated infrared light
Ambient light limit		10000 Lux
Functional safety related parameters		
$MTTF_d$		800 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Function indicator		LED yellow: switching state LED red: pre-fault indication
Control elements		Detection range adjuster, light/dark switch
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I_0	≤ 35 mA
Time delay before availability	t_v	≤ 50 ms
Output		
Pre-fault indication output		1 PNP, active when falling short of the stability control
Switching type		light/dark on
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 200 mA , resistive load
Voltage drop	U_d	≤ 3 V
Switching frequency	f	≤ 300 Hz
Response time		≤ 1.5 ms
Standard conformity		
Standards		EN 60947-5-2
Ambient conditions		
Ambient temperature		-25 ... 55 °C (-13 ... 131 °F)
Storage temperature		-40 ... 55 °C (-40 ... 131 °F)
Mechanical specifications		
Degree of protection		IP67
Connection		terminal compartment PG9, ≤ 2.5 mm^2
Material		
Housing		PBT
Optical face		PMMA
Mass		100 g
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤36 V
Approvals		CE

Curves/Diagrams

Characteristic response curve



Permissible distance (offset) between optical axis and object.



Release date: 2014-04-03 11:57 Date of issue: 2014-04-03 088825_eng.xml

Additional Information

Conventional use:

The reflex light scanner contains the emitter and receiver in a single housing. The light from transmitter is beamed back from the recorded object is evaluated by the receiver. The detection range depend on the object colour. With dark or very small objects the detection range reduces.

Mounting instructions:

The sensor can be fastened over the through-holes directly or with the included mounting bracket.
The base surface must be flat to avoid distorting the housing during mounting. It is advisable to secure the bolts and screws with washers so that the sensor does not become misaligned.

Instructions for adjustment:

Adjust the sensor on the background. If the yellow LED illuminates, the detection range needs to be reduced with the detection range adjuster, until the yellow LED goes off.

Object detection check:

Position the object into the light beam. Position light spot on object. If the object is detected, the yellow LED illuminated. If it does not light up, further to adjust the detection range with the potentiometer, until the yellow LED lights up.
The red LED flashes if reception deteriorates (e.g. soiled lenses or by maladjustment) and when falling short of the stability control.

lustration:

We recommend that you clean the optical interfaces and check the plug-in connections and screw connections at regular intervals.

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